

	Type	L #	Hits	Search Text	Dbs	Time Stamp	Com men dots	Error Defin ition	Error ro
1	BRS	L1	25727	peptide same amphipathic same cationic sam alpha-helix	USPAT; US - PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:33			0
2	BRS	L2	98337	antimicrobial or antifungal or antiviral or parasite	USPAT; US - PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:33			0
3	BRS	L3	63	(peptide same amphipathic same cationic sam alpha-helix) same (antimicrobial or antifungal or antiviral or parasite)	USPAT; US - PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:34			0
4	BRS	L4	12	((peptide same amphipathic same cationic sam alpha-helix) same (antimicrobial or antifungal or antiviral or parasite) ) same antibiotic	USPAT; US - PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:34			0
5	BRS	L5	0	((peptide same amphipathic same cationic sam alpha-helix ) same (bacterium or fungus or virus or parasite) ) same (multiple adj drug adj resistance)	USPAT; US - PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:34			0

Type	L #	Hits	Search Text	DBs	Time Stamp	Com men dots	Error Defin ition	Error ro
6	BRS	L6	(( peptide same amphipathic same cationic sam alpha-helix ) same (bacterium or fungus or virus or parasite) ) same (gram adj positive adj bacterium)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:35		0	
7	BRS	L7	(( peptide same amphipathic same cationic sam alpha-helix ) same (bacterium or fungus or virus or parasite) ) same (gram adj negative adj bacterium)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:35		0	
8	BRS	L8	15	(( peptide same amphipathic same cationic sam alpha-helix ) same (antimicrobial or antifungal or antiviral or (parasite adj infection) ) ) or (( peptide same amphipathic same cationic sam alpha-helix ) same (bacterium or fungus 	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:35		0

Type	L #	Hits	Search Text	DBs	Time Stamp	Com men ts	Error	Defin ition	Er rors
9	BRS	L9	50465 8	penicillin, or cephalosporin or beta-lactam or amino glycoside or quinolone or tetracycline or macrolide or glycopeptide or lipopeptide or ( ribosome adj inhibitor)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:36	0		
10	BRS	L10	97	(( peptide same amphipathic same cationic sam alpha-helix ) same ( antimicrobial or antifungal or antiviral or ( parasite adj infection ) ) or amphipathic same cationic sam alpha-helix ) same ( bacterium or fungus or virus or parasite ) ) same ( penicillin, or cephalosporin or beta-lactam or amino glycoside or quinolone or tetracycline or macrolide or glycopeptide or lipopeptide or ( ribosome adj inhibitor) )	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/1 9 08:36	0		

Type	L #	Hits	Search Text	DBs	Time Stamp	Com men ts	Error	Error ro definition
11	BRS	L11	(peptide same amphipathic same cationic sam alpha-helix ) same parasite same malaria or trypanosomiosis	USPAT; US - PGPUB; EPO ; JPO ; DERWENT	2002/09/1 9 08:37		0	

> d his

(FILE 'HOME' ENTERED AT 08:40:58 ON 19 SEP 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA'  
ENTERED AT

08:41:28 ON 19 SEP 2002

L1 82 S PEPTIDE (P) AMPHIPATHIC (P) CATIONIC (P) ALPHA-HELIX  
L2 757556 S ANTIMICROBIAL OR ANTIFUNGAL OR ANTIVIRAL OR  
PARASITE  
L3 54 S L1 (P) L2  
L4 744735 S ANTIBIOTIC  
L5 5 S L3 (P) L4  
L6 2 DUPLICATE REMOVE L5 (3 DUPLICATES REMOVED)  
L7 402381 S PENICILLIN OR CEPHALOSPORIN OR BETA-LACTAM OR  
(AMINO GLYCOSID  
L8 82822 S MACROLIDE OR GLYCOPEPTIDE OR LIPOPEPTIDE OR  
(RIBOSOME INHIBIT  
L9 472210 S L7 OR L8  
L10 0 S L3 (P) L9

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=> file medline caplus biosis embase scisearch agricola  
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=> s peptide (p) amphipathic (p) cationic (p) alpha-helix  
L1 82 PEPTIDE (P) AMPHIPATHIC (P) CATIONIC (P) ALPHA-HELIX

=> s antimicrobial or antifungal or antiviral or parasite  
L2 757556 ANTIMICROBIAL OR ANTIFUNGAL OR ANTIVIRAL OR PARASITE

=> s l1 (p) l2  
L3 54 L1 (P) L2

=> s antibiotic  
L4 744735 ANTIBIOTIC

=> s l3 (p) l4  
L5 5 L3 (P) L4

=> duplicate remove l5  
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE'  
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PROCESSING COMPLETED FOR L5  
L6 2 DUPLICATE REMOVE L5 (3 DUPLICATES REMOVED)

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L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 2001:519479 CAPLUS  
DOCUMENT NUMBER: 136:165482  
TITLE: Antimicrobial peptides - structure and function  
AUTHOR(S): Mickowska, Barbara  
CORPORATE SOURCE: Zakl. Biochem. Anal., Inst. Biol. Molekularnej im.  
Jana Zurzyckiego, Uniw. Jagiellonski, Krakow, 31-120,  
Pol.  
SOURCE: Postepy Biologii Komorki (2001), 28(Supl. 16), 245-259  
CODEN: PBKODV; ISSN: 0324-833X  
PUBLISHER: Fundacja Biologii Komorki i Biologii Molekularnej  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: Polish

AB A review. \*\*\*Antimicrobial\*\*\* \*\*\*peptides\*\*\* are part of the defense system mainly in plants and animals. In spite of great diversity of origin and amino acid compn., almost all of them are \*\*\*cationic\*\*\* (due to presence excess Arg and Lys residues) and the mols. form \*\*\*amphipathic\*\*\* structures. \*\*\*Antimicrobial\*\*\* \*\*\*peptides\*\*\* can be divided into several main groups based on their 3-dimensional structure: 1. Linear, forming . \*\*\*alpha\*\*\* .- \*\*\*helixes\*\*\* ; 2. Antiparallel .beta.-sheets stabilized by intramol. disulfide bonds; 3.

.alpha.-Helical and .beta.-sheet mixed structure with disulfide bonds; 4. Cyclic structures; and 5. Linear, with unusually high content of certain amino acid, often forming extended helices. \*\*\*Antimicrobial\*\*\* activity of these \*\*\*peptides\*\*\* is very broad, including bacteria, fungi, some protozoa, and even cancer cells. They are selectively toxic to microorganisms. Owing to the increasing resistance of bacteria to conventional \*\*\*antibiotics\*\*\*, \*\*\*antimicrobial\*\*\* \*\*\*peptides\*\*\* seem to be a promising source of \*\*\*antibiotics\*\*\* in future.

L6 ANSWER 2 OF 2 MEDLINE DUPLICATE 1  
ACCESSION NUMBER: 92078177 MEDLINE  
DOCUMENT NUMBER: 92078177 PubMed ID: 1744108  
TITLE: Bombinin-like peptides with antimicrobial activity from skin secretions of the Asian toad, *Bombina orientalis*.  
AUTHOR: Gibson B W; Tang D Z; Mandrell R; Kelly M; Spindel E R  
CORPORATE SOURCE: Department of Pharmaceutical Chemistry, University of California, San Francisco 94143-0446.  
CONTRACT NUMBER: CA39237 (NCI)  
RR01614 (NCRR)  
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1991 Dec 5) 266 (34) 23103-11.  
Journal code: 2985121R. ISSN: 0021-9258.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
OTHER SOURCE: GENBANK-M55199; GENBANK-M55200; GENBANK-M55201;  
GENBANK-M76483; GENBANK-M76484; GENBANK-M96682;  
GENBANK-S66610; GENBANK-S66768; GENBANK-S68993;  
GENBANK-S70582  
ENTRY MONTH: 199201  
ENTRY DATE: Entered STN: 19920202  
Last Updated on STN: 19920202  
Entered Medline: 19920113  
AB The structures and hemolytic and bactericidal activities of three bombinin-like \*\*\*peptides\*\*\*, or BLP-1-3, from the skin of *Bombina orientalis* are described. The \*\*\*peptides\*\*\* were isolated from the skin of *B. orientalis* and sequenced by tandem mass spectrometry and are \*\*\*amphipathic\*\*\*, \*\*\*cationic\*\*\* \*\*\*peptides\*\*\* of 25-27 amino acids in length. The sequence of the most abundant member (BLP-1) is: Gly-Ile-Gly-Ala-Ser-Ile-Leu-Ser-Ala-Gly-Lys-Ser-Ala-Leu-Lys-Gly-Leu-Ala-Lys-Gly-Leu-Ala-Glu-His-Phe-Ala-Asn-NH<sub>2</sub>. All three \*\*\*peptides\*\*\* were found to share considerable, but not complete, homology with bombinin, an \*\*\*antimicrobial\*\*\*, hemolytic \*\*\*peptide\*\*\* first isolated by Michl and Csordas (Csordas, A., and Michl, A. (1970) Monatsh. Chem. 101, 182-189) from the skin of *Bombina variegata*. The BLPs have been assayed for \*\*\*antibiotic\*\*\* and hemolytic activity and found to be more potent than magainin 2 (a related \*\*\*antimicrobial\*\*\* \*\*\*peptide\*\*\* from *Xenopus laevis*) in their ability to kill bacteria. However, no significant hemolytic activity was found for these \*\*\*peptides\*\*\* which suggests a selectivity for prokaryotic over eukaryotic membranes. The molecular basis for antibacterial activity is presumed to be due to their predicted \*\*\*amphipathic\*\*\* alpha-helical structures which is supported by circular dichroism measurements that found significant helical content (63-69% \*\*\*alpha\*\*\* - \*\*\*helix\*\*\* ) in 40% trifluoroethanol. Last, a cDNA library was constructed from the skin of *B. orientalis* and screened with an oligonucleotide probe complementary to the COOH terminus of BLP-1. Several clones were isolated and sequenced that encode BLP-1 and BLP-3, as well as an additional \*\*\*peptide\*\*\* (BLP-4) that differs by two amino acid substitutions from BLP-3.

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L5 5 S L3 (P) L4  
L6 2 DUPLICATE REMOVE L5 (3 DUPLICATES REMOVED)

=> s penicillin or cephalosporin or beta-lactam or (amino glycoside) or quinolone or tetracycline  
L7 402381 PENICILLIN OR CEPHALOSPORIN OR BETA-LACTAM OR (AMINO GLYCOSIDE)  
OR QUINOLONE OR TETRACYCLINE

=> s macrolide or glycopeptide or lipopeptide or (ribosome inhibitor)  
L8 82822 MACROLIDE OR GLYCOPEPTIDE OR LIPOPEPTIDE OR (RIBOSOME INHIBITOR)

=> s l7 or l8  
L9 472210 L7 OR L8

=> s l3 (p) l9  
L10 0 L3 (P) L9

=> d his

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L9 472210 S L7 OR L8  
L10 0 S L3 (P) L9

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